

**UNITED STATES DISTRICT COURT FOR THE
NORTHERN DISTRICT OF OKLAHOMA**

LEXINGTON INSURANCE COMPANY;)
GAVILON FERTILIZER, LLC; CERTAIN)
UNDERWRITERS AT LLOYD'S OF)
LONDON; and GAVILON GRAIN, LLC,)
)
)
Plaintiffs,)
)
v.) **Case No. 14-CV-0610-CVE-TLW**
)
)
NEWBERN FABRICATING, INC., and)
BAUCOM CONCRETE CONSTRUCTION,)
INC.,)
)
Defendants,)
)
and)
)
NEWBERN FABRICATING, INC.,)
)
Third-Party Plaintiff,)
)
v.)
)
DOVELAND ENGINEERING CO.,)
)
Third-Party Defendant.)

OPINION AND ORDER

Now before the Court is the report and recommendation (Dkt. # 311) of Magistrate Judge T. Lane Wilson recommending that the Court grant in part and deny in part Newbern Fabricating, Inc.'s Motion to Exclude or Limit Testimony of Lauran Larson (Dkt. # 132). Plaintiffs Gavilon Grain, LLC and Gavilon Fertilizer, LLC have filed an objection (Dkt. # 315) to the report and recommendation, and Newbern has filed a response (Dkt. # 317).

I.

This action arises from the collapse of a wall of a storage facility at the Tulsa Port of Catoosa. Plaintiff Gavilon Grain owned the building, which Gavilon Fertilizer used to store fertilizer.¹ Dkt. # 132, at 6. In 2004, Gavilon Grain contracted with Newbern, a construction company that builds river terminals and equipment, to build a concrete storage facility. Id. Baucom Concrete Construction, Inc. worked as the subcontractor responsible for the concrete work on the project. Id. On March 7, 2013, a reinforced concrete wall of the facility collapsed. Id. at 6-7. Plaintiffs Lexington Insurance Company and Lloyd's of London paid a number of claims related to the losses sustained from the wall collapse. Dkt. # 54, 4-5. The Gavilon plaintiffs assert that they both suffered losses from the wall collapse, including damage to the building and associated equipment and loss of profit and use of facilities. Id. at 5. Plaintiffs filed this action against defendants Newbern and Baucom, asserting that the damages were caused by inadequate design and installation of the concrete columns. Id. at 5-9.

The Gavilon plaintiffs hired Lauran Larson, P.E., S.E., immediately after the collapse to observe conditions and assist in the temporary stabilization of the remaining structure. Dkt. # 132-1, at 2. Subsequently, Larson was asked to review information relevant to the collapse and opine on the cause of the collapse, the scope and cost of the required repairs and remediation, and whether any structural deficiencies existed with respect to the applicable building code or construction

¹ In 2011, Gavilon Grain merged with DeBruce Grain, the party that contracted for and oversaw the construction of the storage facility. For clarity's sake, the Court refers to both entities as Gavilon Grain. Also in 2011, Gavilon Fertilizer merged with DeBruce Fertilizer. The Court refers to Gavilon Fertilizer as representative of both entities. See Dkt. # 285, at 3 n.2. When referencing Gavilon Grain and Gavilon Fertilizer together, the Court uses the Gavilon plaintiffs.

standard. Id. at 2-3. Larson issued a report pursuant to Federal Rule of Civil Procedure 26(a)(2)(B) in which he concluded that the primary cause of the collapse was “flexural failure of the concrete columns due to failure of the column vertical steel reinforcing bars.” Id. at 3. The discussion of Larson’s findings includes a section titled “Reinforcing Bar Fracture Surface,” which states in relevant part:

[T]he fracture surface [of the rebar], which is roughly perpendicular to the long axis, exhibits a gradient in surface roughness transition from “fine” profile to “rough” profile in approximate relation to distance from the weld. In general, finer surface profile of a material crack is consistent with small, incremental damage accumulation progress over repeated load cycles. Conversely, rough surface profile is consistent with failure of an area of single event surface rupture. This observed surface profile would be consistent with a process of damage accumulation over multiple load cycles within the relatively short life of the West Wall as batches of product were alternately stockpiled and removed as market demand dictated.

Id. at 6.

Larson is a civil/structural engineer with 35 years of experience in dynamic and static structural design. Id. at 24. Larson earned a bachelor of science degree in civil/structural engineering from the University of Minnesota and a master of science degree in civil/structural engineering from Cornell University. Id. Larson testified that he is not a metallurgist, but that he took classes in the failure behaviors of steel during his undergraduate and graduate studies, including a seminar on structural steel failure in 1982. Dkt. # 192-1, at 6-10. Larson further testified that his opinion regarding the fracture surface of the rebar was based on the structural steel failure course he took in 1982. Id. at 118.

Newbern filed a motion to exclude or limit the testimony of Larson, arguing that Larson’s opinions regarding (1) the cost of repairs and remediation, (2) fatigue or damage accumulation in

the rebar, and (3) defects in welding on columns that did not fail, are inadmissible.² Dkt. # 132. The magistrate judge issued a report and recommendation recommending that (1) that Larson cannot testify as to the cost of repairs of the facility because he lacks the required expertise and his methodology is unreliable and based on insufficient data; (2) that Larson cannot testify about fatigue or damage accumulation in the rebar because he lacks the required expertise and the Gavilon plaintiffs have failed to meet their burden of establishing that Larson's methodology is reliable; and (3) that Larson is qualified to testify that the rebar was not welded and/or installed according to design. Dkt. # 311. The Gavilon plaintiffs object only to the magistrate judge's recommendation regarding Larson's proposed testimony on fatigue and damage accumulation on the rebar. Dkt. # 315.

II.

The Court may refer any pretrial matter pending before it to a magistrate judge for a report and recommendation. 28 U.S.C. § 636(b)(1)(A). However, the parties may object to the magistrate judge's recommendation within fourteen days of service of the recommendation. Schrader v. Fred A. Ray, M.D., P.C., 296 F.3d 968, 975 (10th Cir. 2002); Vega v. Suthers, 195 F.3d 573, 579 (10th Cir. 1999). The Court "shall make a de novo determination of those portions of the report or specified proposed findings or recommendations to which objection is made." 28 U.S.C. § 636(b)(1). The Court may accept, reject, or modify the report and recommendation of the magistrate judge in whole or in part. Fed. R. Civ. P. 72(b).

² Newbern also argued that Larson's testimony regarding alleged building code violations should be excluded. Dkt. # 132, at 22-25. Newbern subsequently withdrew this objection. See Dkt. # 278.

III.

The Gavilon plaintiffs object only to part five of the report and recommendation (Dkt. # 311), which recommends that Larson should be barred from testifying at trial regarding damage accumulation, fatigue, or weakening in the failed rebar because Larson is not qualified in the area of metallurgy, and the Gavilon plaintiffs failed to establish Larson's methodology is reliable. Dkt. # 315, at 3.

In Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993), the Supreme Court held that district courts must initially assess the admissibility of "scientific" expert testimony under Rule 702 of the Federal Rules of Evidence. The Supreme Court extended the gatekeeper role of federal district courts to all expert testimony in Kumho Tire Co., Ltd. v. Carmichael, 526 U.S. 137 (1999). In Bitler v. A.O. Smith Corp., 400 F.3d 1227 (10th Cir. 2005), the Tenth Circuit discussed the role of district courts in considering a Daubert challenge to the admissibility of expert testimony. First, the court should make a preliminary finding that the expert is qualified to testify. Id. at 1232-33. Next, the proponent of expert testimony must establish that the expert used reliable methods to reach his conclusion and that the expert's opinion is based on a reliable factual basis. Id. at 1233. The Tenth Circuit cited four factors that district courts should apply to make a reliability determination:

(1) whether a theory has been or can be tested or falsified; (2) whether the theory or technique has been subject to peer review and publication; (3) whether there are known or potential rates of error with regard to specific techniques; and (4) whether the theory or approach has "general acceptance."

Id. at 1233 (citing Daubert, 509 U.S. at 593-94). The Tenth Circuit was clear that "a trial court's focus generally should not be upon the precise conclusions reached by the expert, but on the methodology employed in reaching those conclusions." Id. In other cases, the Tenth Circuit has

emphasized that any analytical gap in an expert's methodology can be a sufficient basis to exclude expert testimony under Daubert. Trucks Ins. Exchange v. MagneTek, Inc., 360 F.3d 1206, 1212-13 (10th Cir. 2004); Goebel v. Denver & Rio Grande Western R. Co., 346 F.3d 987, 992 (10th Cir. 2003). Under Daubert, “any step that renders the analysis unreliable . . . renders the expert’s testimony inadmissible. This is true whether the step completely changes a reliable methodology or merely misapplies that methodology.”” Mitchell v. Gencorp Inc., 165 F.3d 778, 783 (10th Cir. 1999) (citing In re Paoli R.R. Yard PCB Litigation, 35 F.3d 717, 745 (3d Cir. 1994)).

A.

The Gavilon plaintiffs argue that Larson’s education and experience as a structural engineer qualify him to testify about the damage accumulation and fatigue in the failed rebar. Dkt. # 315 at 4. Larson testified that his undergraduate and graduate studies included instruction on the failure mechanisms of steel. Dkt. # 192-1, at 6-10. In particular, Larson attended a seminar on fatigue of steel while an undergraduate student in 1982. Id. at 8. At the seminar, the students were shown pictures of fractured steel. Id. at 16. The Gavilon plaintiffs have presented no evidence that Larson has ever examined fractured rebar outside of the steel fatigue seminar and this case. Larson’s education and experience are as a structural engineer, and he does not consider himself a metallurgist. Id. at 6. Moreover, Larson could not answer questions in his deposition about metallurgical concepts or their application to this case. His deposition included the following exchange:

Q: Okay. Do you know what beach marks are?

A: I don’t recall.

Q: In looking at the fracture surfaces on the steel reinforcing bars in Figures 12, 13, 14, or any of the other photographs that you saw or fracture surfaces that you saw in person, did you see any physical evidence of subcritical crack propagation?

A: I saw weld flaws, but the term subcritical crack propagation, these photographs and my description of the surface profile represent my interpretation of the failure.

Id. at 17.

“[A]s long as an expert stays within the reasonable confines of his subject area, . . . a lack of specialization does not affect the admissibility of the expert opinion, but only its weight.” Ralston v. Smith & Nephew Richards, Inc., 275 F.3d 965, 969 (10th Cir. 2001) (quoting Wheeler v. John Deere Co., 935 F.2d 1090, 1100 (10th Cir. 1991)) (internal quotation marks omitted). The question here is whether metallurgy is “within the reasonable confines” of Larson’s subject area. See id. Structural engineering and metallurgy are two related, but distinct, areas of expertise. Structural engineering involves calculating the stability and strength of structures and analyzing and critiquing designs for structures to ensure they are designed with the requisite stability and strength. Metallurgy involves understanding the composition and behavior of metals. A structural engineer must understand some general aspects of metallurgy, such as how welding affects rebar, in order to effectively analyze the strength and stability of structure. However, at issue here is Larson’s opinion on why the wall collapsed based on his observations of the failed rebar. It is not within the purview of structural engineering to examine failed rebar for fractures in order to draw conclusions about what caused the failure; this requires specific education and/or experience. Discussing steel failure in some of his classes and one 1982 steel fatigue seminar do not constitute a sufficient educational background to render Larson’s metallurgy opinions reliable, especially when Larson admitted he is not a metallurgist, relied solely on the undergraduate seminar for his opinions, has no other experience with damage accumulation and fatigue in steel, and in his deposition could not discuss

metallurgical concepts. Therefore, the Court finds that Larson is not qualified to testify as to damage accumulation, fatigue, weakening, or fracturing of the rebar in this case.

B.

The Gavilon plaintiffs also object to the magistrate judge's finding that they failed to show that Larson's methodology, of observing the gradient of the fracture surface of the rebar to draw conclusions about the cause of the failure, is reliable. Dkt. # 315, at 6. The party proffering an expert "must show that the method employed by the expert in reaching the conclusion is scientifically sound and that the opinion is based on facts which sufficiently satisfy Rule 702's reliability requirements." Mitchell, 165 F.3d at 781. However, the proffering party "need not prove that the expert is undisputedly correct or that the expert's theory is 'generally accepted' in the scientific community." Id. (citing Moore v. Ashland Chem., Inc., 151 F.3d 269, 276 (5th Cir. 1998)).

Newbern attached to its motion a declaration by Edward Cox, Ph. D, P.E., C.W.I., a metallurgist with over 40 years of experience in metallurgical engineering. Dkt. # 132-7. Dr. Cox states that Larson's methodology is not common or accepted, and that no commonly accepted fracture analysis textbook or industry handbook supports his methodology. Id. at 2. In response, the Gavilon plaintiffs offered no defense of the reliability of Larson's methodology. See Dkt. # 192, at 11. Newbern has raised credible concerns regarding the reliability of Larson's methodology, and the record before the Court provides no reason to find Larson's methodology sound. Thus, the Court finds that, even if Larson were a qualified expert in metallurgy, the Gavilon plaintiffs have failed to meet their burden of establishing that his methodology is reliable.

No objection has been made to the remaining recommendations in the report and recommendation (Dkt. # 311). The Court has conducted an independent review of the record and finds no reason to disturb the magistrate judge's proposed findings and recommendations.

IT IS THEREFORE ORDERED that the report and recommendation (Dkt. # 311) is **accepted**, and Newbern Fabricating, Inc.'s Motion to Exclude or Limit Testimony of Lauran Larson (Dkt. # 132) is **granted in part** and **denied in part** as set forth in the report and recommendation (Dkt. # 311).

DATED this 31st day of January, 2017.



CLAIRES V. EAGAN
UNITED STATES DISTRICT JUDGE